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EXAMINER

SCHNEIDER, CRAIG M

ART UNIT	PAPER NUMBER
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3753

MAIL DATE	DELIVERY MODE
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08/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/756,917

Applicant(s)

PARRISH, ROB G.

Examiner

Craig M. Schneider

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6-49 and 51-73 is/are pending in the application.
- 4a) Of the above claim(s) 11-14, 27, 28, 34-36, 39, 40, 57-61, and 72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6-10, 15-21, 23-26, 29-33, 37, 38, 41-49, 51-56, 62-71, and 73 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 11-36, 39, 40, 42, 47, 48, and 57-61 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/16/07. The examiner asserts that claims 15-26, 29-33, 42, 47-48 read on the elected species and will be examined. The examiner asserts that claim 72 reads on a non-elected species. More specifically the claim is directed to sub-species AC because of the routed portion. The claims that were examined per the elected species are 2-4, 6-10, 15-26, 29-33, 37, 38, 41-56, 62-71, and 73. Conversely the listing of the withdrawn claims per the species election are 11-14, 27, 28, 34-36, 39, 40, 57-61, and 72.

2. Applicant's elections with traverse of Species A, Species AA, and Species BB in the reply filed on 7/16/07 is acknowledged. The traversal is on the ground(s) that the subspecies requirement is in fact not a subspecies and therefore the restriction is not correct. This is not found persuasive because the applicant and the examiner had a discussion as noted by the applicant on 7/10/07. In the conversation the examiner explained to the applicant that the species restriction between species A-E was the general idea of the valve as a whole and that the applicant presented five different general embodiments of the applicant's invention. The subspecies restrictions were directed to specific parts of the overall valve, i.e. the selective interrupter and the actuator. The selective interrupter can have a number of designs to provide various

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connection pathways for the fluid. The actuator as depicted in the drawings can be moved by various methods. Therefore the indication of subspecies was correct.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "14" and "376a" have both been used to designate the same hole in the upper drawing of Figure 6 and "12" and "376a" have both been used to designate the same hole in the upper drawing of Figure 6. They are further objected to because reference character "150" is used to designate both the circular groove and the tapered groove in Figure 7.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "376a" has been used to designate both a end hole in the selective interrupter in Figure 3 and a side hole in the selective interrupter in Figures 6, 7, 10, 11, 12, and 14.
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 4, 6, 30, and 200.
6. The drawings are objected to because in Figures 3 and 5 the hollow interrupter is depicted as having a thick wall per the dashed lines of the holes 376c and 376b but the walls of the interrupter are depicted as being very thin. Figure 15 is objected to because the through holes that are shown could not possibly mate up with any of the holes that are depicted on the body of the valve, since the end of the holes 188a and

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188b where the identification marks are pointing would correspond with the bonnet and the other end would not mate with the center inlet hole. In Figure 16 "103" is not pointing to a bonnet hole and needs to be corrected. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities:

In para. 1, line 1 "pending U.S. Application Serial No. 09/612,354" should be --U.S. Patent 6,684,722--.

In para. 73, line 2 "an ann hole" should be --a bonnet hole--.

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In para. 75, line 6 "Figure 40" should be --Figure 18--.

Appropriate correction is required.

Claim Objections

8. Claim 55 is objected to because of the following informalities: the claim is dependent off of a cancelled claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 71 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of the diameter of the hollow interrupter being substantially greater than the circumference of the first aperture and the second aperture is indefinite because it is unclear how the diameter of the hollow selective interrupter, which is clearly greater than the circumference of an aperture that passes through it, would dampen and substantially change a back pressure flowing through the apertures.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 2-4, 6, 7, 9, 10, 15-21, 23-26, 29-31, 37, 38, 54-56, and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (1,172,101) in view of Frechette (2,165,096).

Armstrong discloses a valve comprising a body (1). A hollow selective interrupter (5) positioned inside the body for rotation therein. The valve comprises a flow arrangement between the hollow selective interrupter and the body. A bonnet (12 & 14) connected to the body. An arm (11) extending through the bonnet and connected to the hollow selective interrupter. An actuator (18') movably connected to the arm. Wherein rotating the hollow selective interrupter proportionally transitions a flow relationship between a first flow path and a second flow path so as to substantially minimize a change in a back pressure from a flow source as the flow relationship gradually transitions from the first flow path to the second flow path. Armstrong fails to disclose that the bonnet is in contact with the hollow selective interrupter. Frechette discloses that the bonnet (86) is in direct contact with the hollow selective interrupter (56) as seen in Figures 7 and 8 (page 2, col. 2, lines 50-51.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a bonnet to hollow selective interrupter as disclosed by Frechette onto the valve assembly of Armstrong, to have a press fit connection.

It would have been obvious to one of ordinary skill in the art to utilize the valve of Armstrong in a reverse manner wherein the inlets are outlets and the outlet is an inlet, since the valve will function equally well in either direction which makes the flow direction through the valve a non-critical element.

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Regarding claim 10, the intended use of the apertures being connected to a driver source, instrument, and dummy load does not patentably distinguish over the prior art since the device could be connected to a driver source, instrument, and dummy load.

Regarding claim 37, wherein the arm further comprises an arm connection hole (the hole that the screw passes through).

Regarding claim 38, wherein the actuator further comprises an actuator connection hole (the hole through which the screw passes).

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Johnson (3,506,239).

Armstrong/Frechette disclose all the features of the claimed invention except that the valve further comprises a lubricant between the hollow selective interrupter and the body. Johnson discloses putting a Teflon coating on a plug valve, wherein the Teflon coating is between the plug and the valve body (col. 4, lines 36-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Teflon coating of the plug as disclosed by Johnson with the valve assembly of Armstrong/Frechette, to provide a self lubricating plug.

14. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 9 above, and further in view of Bordelon et al. (5,887,608).

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Armstrong/Frechette in combination disclose all the features of the claimed invention except that the arm further comprises gearing and the actuator further comprises a geared drive shaft in mesh with the gearing. Bordelon et al. disclose gearing (52) on the arm and further that the actuator comprises a geared drive shaft (1) (col. 4, line 55 to col. 5, line 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the actuator arrangement of Bordelon et al. onto the valve assembly of Armstrong/Frechette, to have automated control of the valve.

15. Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Frechette.

Armstrong/Frechette in combination disclose all the features of the claimed invention except that the bonnet comprises a plurality of mounting holes positioned for connecting the bonnet to the body. Frechette discloses the use of a plurality of mounting holes (hole in the valve body that accepts 90) positioned for connecting the bonnet to the body (page 2, col. 2, lines 44-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the screw hole connection of Frechette onto the valve assembly of Armstrong/Frechette, to eliminate the need for a wrench to open the valve assembly.

16. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Frechette.

Armstrong/Frechette in combination disclose all the features of the claimed invention except that the bonnet further comprises a stop, wherein the stop limits a rotary movement of the hollow selective interrupter. Frechette discloses using a plug (100) that is used to mate with a recess (stop) (94) in the bonnet of the valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the plug and recess interaction of Frechette onto the Armstrong/Frechette valve assembly, to have preset location that the valve would stop.

17. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Kelchner (4,355,659).

Armstrong/Frechette in combination disclose all the features of the claimed invention except that the valve comprises a friction member located between the bonnet and the body. Kelchner discloses a valve that comprises a friction member (34) located between the bonnet and the body (col. 2, lines 26-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the friction member of Kelchner onto the valve assembly of Armstrong/Frechette, to provide further sealing of the valve assembly.

18. Claim 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Frechette.

Armstrong/Frechette in combination disclose all the features of the claimed invention except that the actuator comprises a pressure pin and that the bonnet comprises at least two pressure pinholes for sliding the pressure into a locked position

therein. Frechette discloses using a plug (pressure pin)(100) that is used to mate with a recess (stop) (94) in the bonnet of the valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the plug and recess interaction of Frechette onto the Armstrong/Frechette valve assembly, to have preset location that the valve would stop.

19. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette.

The examiner takes official notice that the use of an actuator comprising a software program to control rotation of the hollow selective interrupter is old and well known in the art and would be combined with the device of Armstrong/Frechette for reasons that are old and well known in the art.

20. Claims 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette as applied to claim 2 above, and further in view of Anderson (2,435,731).

Armstrong/Frechette in combination disclose all the features of the claimed invention except that the body further comprises a lip wherein the lip further comprises a plurality of installation holes positioned for installing the valve into an aircraft instrument panel. Anderson discloses a plurality of installation holes positioned for installing the valve into a control panel as seen in Figures 1 and 2 (col. 4, line 41-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a flange connection to a panel as disclosed by Anderson

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with the valve assembly of Armstrong/Frechette, to have the valve in a central location with other devices on a control panel.

21. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong/Frechette.

The examiner takes official notice that the valve would be formed of aircraft aluminum is old and well known in the art and would be combined with the device of Armstrong/Frechette for reasons that are old and well known in the art.

22. Claims 62-67 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (1,172,101).

Armstrong discloses a valve comprising a body (1). A hollow cylindrical selective interrupter positioned inside the body for rotation therein. Wherein a gradual rotation of the selective interrupter disengages, without disconnecting, a load from a single pneumatic flow source wherein the disengagement of the single pneumatic flow source is accomplished without substantially changing the back pressure on the single pneumatic flow source.

It would have been obvious to one of ordinary skill in the art to utilize the valve of Armstrong in a reverse manner wherein the inlets are outlets and the outlet is an inlet, since the valve will function equally well in either direction which makes the flow direction through the valve a non-critical element.

It would have been further obvious to one of ordinary skill in the art to utilize a pneumatic flow source instead of the liquid flow source, since the valve will function

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equally as well with a pneumatic source or a liquid source which makes the source of fluid a non-critical element.

Regarding claim 63, the recitation of the load, flow source and the dummy load are intended use recitations and they are not given any patentable weight since the valve of Armstrong can be connected to similar items.

Regarding claim 67, the valve further comprising an actuator (18') for rotating the selective interrupter.

23. Claims 68 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong as applied to claim 62 above, and further in view of Frechette.

Armstrong disclose all the features of the claimed invention except that the bonnet further comprises a stop, wherein the stop limits a rotary movement of the hollow selective interrupter. Frechette discloses using a plug (100) that is used to mate with a recess (stop) (94) in the bonnet of the valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the plug and recess interaction of Frechette onto the Armstrong valve assembly, to have preset location that the valve would stop.

24. Claim 71 is rejected under 35 U.S.C. 103(a) as understood as being unpatentable over Armstrong (1,172,101).

Armstrong discloses a valve comprising a substantially cylindrical body (1) having a first end and a second end. A hollow selective interrupter (5) positioned inside the body for rotation therein. A flow arrangement between the selective interrupter and the body. An arm (11) extending through the first end of the body and connected to the

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hollow selective interrupter for rotation of the hollow selective interrupter. Wherein rotating the selective interrupter proportionally transitions a flow relationship between a first flow path and a second flow path. A first aperture located in the hollow selective interrupter. A second aperture located in the hollow selective interrupter. Wherein the first flow path flows through the first aperture in the hollow selective interrupter and the second flow path flows through the second aperture in the hollow selective interrupter. Wherein the hollow selective interrupter has a diameter substantially greater than the circumference of the first and second aperture so as to dampen and substantially minimize a change in a back pressure from the first flow path as the flow relationship gradually transitions from the first flow path to the second flow path.

It would have been obvious to one of ordinary skill in the art to utilize the valve of Armstrong in a reverse manner wherein the inlets are outlets and the outlet is an inlet, since the valve will function equally well in either direction which makes the flow direction through the valve a non-critical element.

Allowable Subject Matter

25. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

26. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Whiting (679,247) and Leopold (1,097,178) disclose cylindrical style valves. Miller (5,810,326) disclose a rack and pinion drive for a valve. Bieniek (1,032,649) and Banks et al. (3,157,199) disclose a pin to hold the handle in a predetermined position.

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig M. Schneider whose telephone number is (571) 272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMS *CMS*
August 21, 2007



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